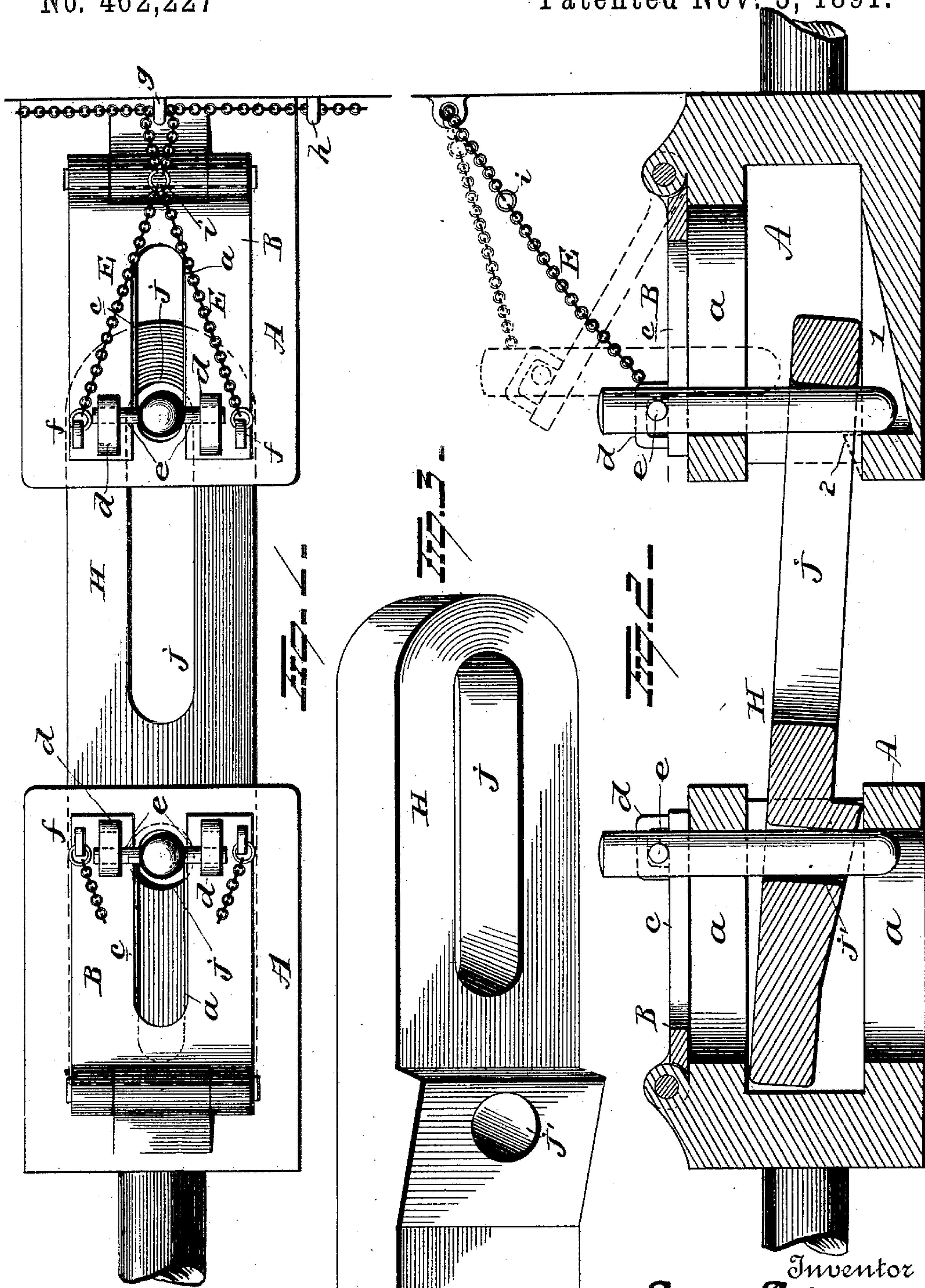


(No Model.)

E. G. ADAMS.
CAR COUPLING.

No. 462,227

Patented Nov. 3, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWIN G. ADAMS, OF COHOES, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 462,227, dated November 3, 1891.

Application filed March 24, 1891. Serial No. 386,251. (No model.)

To all whom it may concern:

Be it known that I, EDWIN G. ADAMS, of Cohoes, in the county of Albany and State of New York, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in car-couplers, the object of the device being to provide simple devices whereby the cars can be readily uncoupled and coupled without the necessity of the brakeman or other train-hand exposing himself to danger by entering between the two platforms or ends of the cars during the act of coupling or uncoupling.

With this end in view my invention consists in the parts and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of two draw-heads embodying my invention. Fig. 2 is a view in longitudinal vertical section through two draw-heads and connecting link, and Fig. 3 is a view of the link.

A represents a draw-head of any desired shape, having in its upper side and also preferably in its lower side elongated slots *a*, slightly wider than the thickness of the coupling-pin and adapted to receive the coupling-pin, as will be hereinafter more fully explained. Instead of providing the lower side of the draw-head with an open slot, as shown, a groove having an abutment at its front end for the lower end of the pin, or a single abutment or shoulder for the lower end of the pin would answer all purposes.

Each draw-head is provided on its upper face with a pivoted frame B, and each frame is provided with an elongated slot *c*, adapted to permit of the free swinging movement of its coupling-pin. While I have shown the frame B slotted from a point near its rear end through its front or free end, it is evident that the front or free end can be closed, as it is only necessary that the slot shall be of sufficient length to permit the pin to tilt when a link enters the draw-head and also permit the pin to retain a vertical position while the frame B is being elevated and lowered.

Each frame is pivoted, hinged, or otherwise loosely secured at its rear end to the top of the draw-head, preferably at a point behind the elongated slot therein, or it can be hinged or otherwise secured to the car-body adjacent to the car; but as the draw-head is generally mounted so as to yield or move independently of the body, it is of course more desirable, less expensive, and complicates matters less to secure the frame directly to the top of the draw-heads.

Each frame is provided near its outer end and on its upper surface with elongated loops *d*, arranged opposite each other on opposite sides of the slot for the reception of the pintles *e* of the coupling-pin. These pintles are near the upper ends of the coupling-pins, and hence as the greater weight is below the pintles or pivotal points of the coupling-pins the tendency of the pins is to remain vertical. The elongated loops on the frame are located approximately in line with or near to the front edge of upper slot in the draw-head, so that when the cars are coupled all the strain on the coupling-pins is borne by the draw-heads and the pintles are comparatively free from strain. From the above it will be seen that the coupling-pins are loosely supported and are free to swing backwardly and upwardly for the entrance of a link held in an opposing draw-head. As soon as the end of the link passes the end of the pin the latter swings back to its normal position and locks the coupling in place.

Numerous devices can be designed for elevating the frame B and the connected coupling-pin; but I prefer the arrangement shown in the drawings, which consists of cords or chains E attached to the eyes *f* near the outer end of the frame and secured together at a point behind the upper end of the coupling-pin. Both cords or chains pass in opposite directions through an eye *g*, secured to the car-body or other convenient part of the device, and from thence pass through eyes *h*, located near the sides of the car and hang within convenient reach of a brakeman or train-hand standing at the side of the car. The cords or chains E are provided with a stop *i* for limiting the upward movement of the frame, the said cord or stop being so located as to stop the movement of the frame

before the lower end of the coupling-pin passes out of the slot in the upper side of the head. By means of pulling the cords or chains the frame can be elevated for uncoupling, and
 5 when the cord is loosened or dropped the pin and frame are forced by gravity to assume their normal position. An ordinary oblong coupling-link can be employed, but I prefer the form shown in Fig. 3. This link H is ob-
 10 long and is provided at one end with an oblong slot *j*, running about one-half (more or less) of the length of the link. The opposite end of the link is solid and provided with a circular opening *j'*, slightly greater in diam-
 15 eter than the diameter of the coupling-pin, so that the latter can be freely inserted and withdrawn therefrom.

Located on a line passing preferably between the oblong slot *j* and the circular opening *j'* is the downwardly-projecting rib, which
 20 latter, when the link is in position, rests on the inner face of the draw-head and forms a pivot on which the link can tilt, thus permitting the outer end of the link to maintain a
 25 position slightly higher than the inner end as it enters the opposing draw-head. The solid end of the link is designed to rest against the back wall of the inner face of the draw-head, and thus relieve the coupling-pin from all
 30 strain as the cars come together, and from its greater weight to turn slightly downward on the pivotal rib and thereby raise and steady the outer end as it approaches the opposite draw-head, the circular opening being suffi-
 35 ciently large to permit of a slight sliding movement of the link.

By means of the swinging frame the entire act of uncoupling can be accomplished from the side of the car, and hence liability to ac-
 40 cident is greatly lessened.

It is evident that many slight changes may be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention,
 45 and hence I would have it understood that I do not confine myself to the exact construc-

tion herein shown and described, but reserve the right to make such slight alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupling, the combination, with a draw-head, a frame hinged to the top of the
 55 draw-head, and a pin having a sliding pivotal connection with the outer free end of the frame, of a coupling-link having a depending rib or projection on one surface to form a
 60 pivotal bearing on which the link can rock, substantially as set forth.

2. The combination, with a draw-head having a slotted upper and lower jaw, a frame hinged to the top of the draw-head, said frame
 65 having a slot corresponding substantially with the slot in the draw-head, and elongated bearings formed at or near the outer or free end of the frame, of a pin having pintles which
 70 operate in the elongated bearings of the frame, substantially as set forth.

3. A coupling-link straight or approximately straight throughout its entire length and provided with an elongated slot at one
 75 end and with a smaller opening or hole near its opposite end, the said link being provided on one face and near the smaller opening
 with a depending integral rib adapted to rest on the floor of the draw-head and form a fulcrum for the link.

4. A coupling-link straight or approxi-
 80 mately straight throughout its entire length and provided on one face with a transverse integral rib and with a small opening passing through the link and rib, and with an elongated opening, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EDWIN G. ADAMS.

Witnesses:

CLAIRS LAVIGNE,
 JULIUS FOUNTAINE.